



Paper 12

Title: Surgical Treatment of Lateral Epicondylitis: A Prospective, Randomised, Double Blinded, Placebo Controlled Clinical Trial

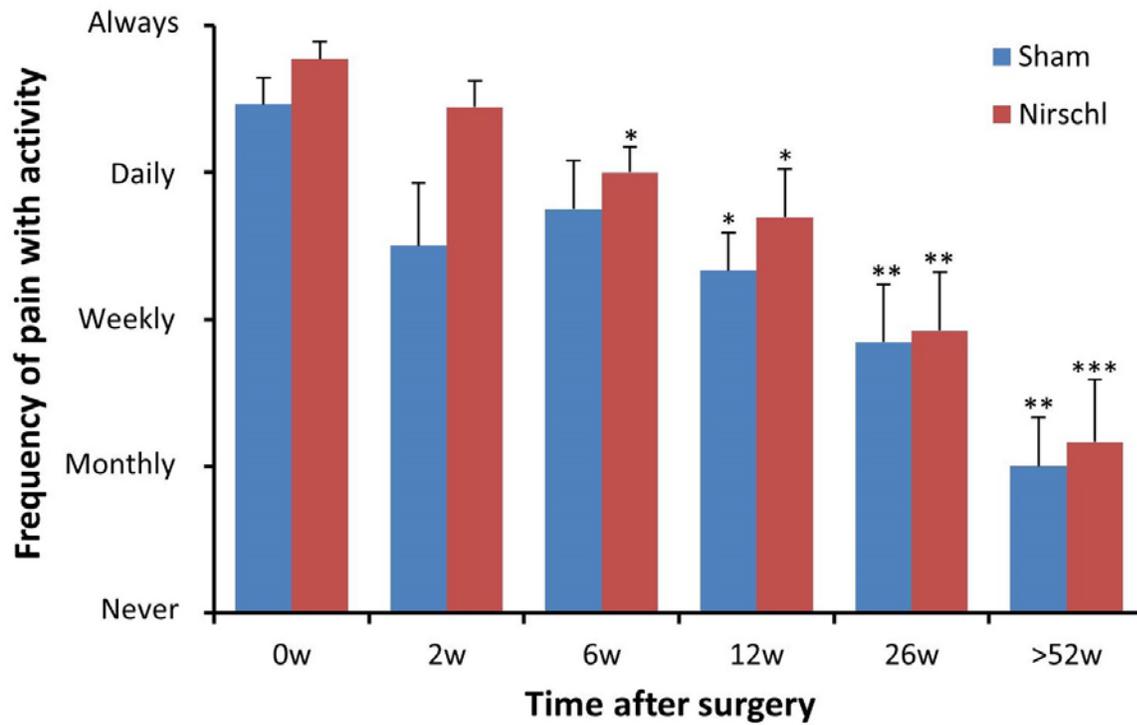
Authors: Martin Krosiak, MBBS, MSpMed, MSurg, George A.C. Murrell, MD, PhD. Orthopaedic Research Institute, Sydney, Australia.

Objectives: A number of surgical techniques for managing tennis elbow have been described, one of the commonest (Nirschl & Pettrone. J Bone Joint Surg Am, 61(6A): 832-839) involves excising the affected portion of extensor carpi radialis brevis (ECRB) origin. The results of this technique, as well as most other described surgical techniques for this condition, have been reported as excellent, yet none have been compared with placebo surgery.

Methods: This study was a prospective, randomised, double blinded, placebo controlled clinical trial investigating the surgical excision of the macroscopically degenerated portion of ECRB (Nirschl technique; n=13) compared with a sham operation (skin incision and exposure of ECRB alone; n=13) to manage tennis elbow, in patients with tennis elbow for more than 6 months who failed at least two non-surgical modalities. The primary outcome measure was defined as patient rated frequency of elbow pain with activity at 6 months post-surgery. Secondary outcome measures included patient rated frequency and severity of pain, functional outcomes, range of motion, epicondyle tenderness and strength at 6 months and >12 months post-surgery.

Results: The two groups were matched for age, gender, hand dominance and duration of symptoms. Both the surgery and placebo procedures improved patient rated pain frequency and severity, elbow stiffness, difficulty with picking up objects, twisting motions and overall elbow rating over 6 months and at >12 months ($p<0.01$). Both procedures also improved epicondyle tenderness, pronation-supination range, grip strength and modified ORI-TETS at 6 months ($p<0.05$). No significant difference was observed between the groups in any parameter at any stage. No side effects or complications were reported. The study was stopped before the calculated number of patients were enrolled, as a post-hoc analysis showed over 6500 patients would need to be recruited in each group to see a significant difference between the groups at 26 weeks, when measuring patient rated frequency of elbow pain with activity.

Conclusion: This study indicates that the surgical excision of the degenerative portion of ECRB offers no additional benefit over and above placebo surgery for the management of chronic tennis elbow.



Frequency of pain with activity. Mean (SEM), n=13 for each group, * = p<0.05, ** = p<0.01, *** = p<0.001 compared with time 0w using Wilcoxon signed rank sum tests